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09/283,676 04/01/99 AUERBACH

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EXAMINER

NAJJAR, S

ART UNIT

PAPER NUMBER

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2154

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

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# Office Action Summary

Application No.

09/283,676

Applicant(s)

AUERBACH, KARL G.

Examiner

Saleh Najjar

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 April 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

1. This action is responsive to the application filed on April 1, 1999. Claims 1-35 are pending examination. Claims 1-35 represent a method and apparatus directed toward proximity as an aid to caching and secondary serving of data.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 16-18, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Shah et al., "system and method for information retrieval regarding services", U.S. Application Serial No. 09/175,516, filed October 20, 1998 (submitted as prior art by applicant).

Shah teaches the invention as claimed including a system and method for measuring round-trip time between a client and mirrored sites so that an optimum mirrored site is chosen to serve the content to the client (see abstract).

As to claim 16, Shah teaches a method of selecting a server to fill a client request for content, the method comprising:

(a) determining that one or more clients needs or will need to receive the content (see figs. 1-6; pages 20-21, Shah teaches determining that one or more clients submitted requests for data); (b) determining a first proximity between the one or more clients and a first server capable of supplying the content; (c) determining a second proximity between the one or more clients and a second server capable of supplying the content (see pages 20-26, Shah teaches that each DRP agent measures its own probe metric measurements and sends it to the local domain name server); and

(d) based upon the relative values of the first and second proximities, choosing one of the first and second servers to fill client requests for the content (see

pages 21-28, Shah teaches that the distributed director chooses one of the mirrored sites to supply the data requested by the client).

As to claim 17, Shah teaches the method of claim 16, wherein the first and second proximities are determined dynamically by a content control system (see pages 26-30, Shah teaches a distributed agent system that automatically probes route metrics and reports its measurements to the domain name server).

As to claim 18, Shah teaches the method of claim 16 above, wherein the content is provided by the server that is most proximate to the one or more of clients (see pages 20-30, Shah teaches that the mirrored site with the shortest round trip time is selected).

As to claim 20, Shah teaches the method of claim 16 above, wherein at least one of the first and second proximities is determined by a combination of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send (see pages 20-26).

As to claims 21-22, Shah teaches the method of claim 16 above, wherein the first proximity is determined by a considering whether the first server and the one or more clients are on the same sub-network, wherein content is provided by the first server when the first server and the one or more clients are on the same sub-network and the second server and the one or more clients are not on the same sub-network. (see pages 25-30).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shah.  
As to claim 19, Shah teaches the method of claim 16 above.

Shah fails to teach a request for a multimedia content.

However, multimedia content request on the network is old and well known in the Internet. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Shah by specifying multimedia content at the mirrored services sites.

6. Claims 1-11, 13-15, and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah et al., further in view of Aggarwal et al., U.S. Patent No. 5,924,116.

Shah teaches the invention substantially as claimed including a system and method for measuring round-trip time between a client and mirrored sites so that an optimum mirrored site is chosen to serve the content to the client (see abstract).

As to claim 1, Shah teaches a method of providing content to a server in anticipation of a need for the content by network clients, the method comprising:

(a) determining the location of a client or group of clients that are likely to access the content (see figs. 1-6; pages 20-21, Shah teaches determining that one or more clients submitted requests for data); (b) determining a first proximity between the client or group of clients and a first server capable of storing and serving the content; (c) determining a second proximity between the client or group of clients and a second server capable of storing and serving the content (see pages 20-26, Shah teaches that each DRP agent measures its own probe metric measurements and sends it to the local domain name server); and

(d) based upon the relative values of the first and second proximities, providing the content from one of the first and second servers (see pages 21-28, Shah teaches that the distributed director chooses one of the mirrored sites to supply the data requested by the client).

Shah fails to teach the claimed limitation of "loading content into the chosen site".

However, Aggarwal teaches a collaborative caching of requested objects by a lower level node as a function of the caching status of objects at a higher level node, where objects frequently requested by the client are cached at lower level nodes close to the client (see abstract). Aggarwal teaches loading content into the chosen site considered closest to the client (see figs. 1-8; col. 5-6, Aggarwal teaches that content is loaded at a node in a hierarchy that is closest to the client in anticipation of its request).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Shah in view of Aggarwal so that content is loaded in the mirrored sites in anticipation for client requests. One would be motivated to do so to provide cache copies of popular documents closer to the user to reduce access latencies.

As to claim 2, Shah teaches the method of claim 1 above, wherein loading the content to the second server is performed automatically by a content control system on the network (see pages 20-30).

As to claim 3, Shah teaches the method of claim 2 above, wherein performing (b), (c), and (d) is accomplished by the content control system (see pages 20-30).

As to claim 4, Shah teaches the method of claim 1 above, wherein the first and second proximities are determined dynamically by a content control system (see pages 20-30, Shah teaches a distributed agent system that automatically probes route metrics and reports its measurements to the domain name server).

As to claim 5, Shah teaches the method of claim 1 above, wherein the content is loaded to the server that is most proximate the client or group of clients (see pages 20-30, Shah teaches that the mirrored site with the shortest round trip time is selected).

As to claims 6-8, Shah teaches the method of claim 1 above.

Shah does not explicitly teach the claimed limitation of sending compressed multimedia data.

However, "Official Notice" is taken that the concept and advantages of requesting or sending multimedia data in compressed format is old and well known in the network data communication art. It would have been obvious to one of ordinary skill

in the art at the time of the invention to modify Shah by specifying compressed data multimedia to conserve bandwidth when data is transmitted across a network.

As to claim 9, Shah teaches the method of claim 1 above, wherein at least one of the first and second proximities is determined by a combination of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send (see pages 20-26).

As to claims 10-11, Shah teaches the method of claim 1 above, wherein the first proximity is determined by a considering whether the first server and the one or more clients are on the same sub-network, wherein content is provided by the first server when the first server and the one or more clients are on the same sub-network and the second server and the one or more clients are not on the same sub-network. (see pages 25-30).

Claims 1-15, and 29-35 do not teach or define any new limitations above claims 1-11 and therefore are rejected for similar reasons.

7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or define neither singly or in combination the limitation of "determining a first loading proximity between a source of the content and the first server; determining a second loading proximity between a source of the content and the second server; and using the first and second loading proximities together with the first and second proximities to determine which of the first and second servers should receive the content".

8. Claims 23, and 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Aggarwal et al..

Aggarwal teaches the invention as claimed including a collaborative caching of web objects using a cache hierarchy where cache replacement policies are implemented (see abstract).

As to claim 23, Aggarwal teaches a method of releasing stored content items from a server to make room for new content items, the method comprising:

(a) identifying, on the server, a first stored content item and a second stored content item; (b) determining a first proximity between the server and a source of the first stored content item; (c) determining a second proximity between the server and a source of the second stored content item (see col. 7-10, Aggarwal teaches determining the access time to a higher level node for each cached object); and (d) releasing one of the first and second stored content items based upon the relative values of the first and second proximities (see col. 7-10, Aggarwal teaches that the replacement selection logic purges objects in the cache based on cost of retrieval.)

As to claim 26, Aggarwal teaches the method of claim 23 above, wherein the first and second stored content items are identified based upon a cache release protocol (see col. 4-8).

As to claim 27, Aggarwal teaches the method of claim 26 above, wherein the cache release protocol is a Least Recently Used algorithm (see col. 9).

As to claim 28, Aggarwal teaches the method of claim 23 above, wherein at least one of the first and second proximities is determined by a combination of the following factors: bandwidth, number of hops, congestion, noise and loss on a network segment, and charges incurred to send (see col. 10).

9. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al..

Aggarwal teaches a method and system for collaborative caching using



hierarchically arranged server nodes (see abstract).

As to claims 24-25 Aggarwal teaches the method of claim 23 above.

Aggarwal does not explicitly teach the claimed limitation wherein the cached items represent a content library or video content. Aggarwal does teach that the objects cached represent any object referenced by a URL on the WEB (see col. 1-8).

However, "Official Notice" is taken that the concept and advantages of caching a content library or video content is old and well known in the data communication art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Aggarwal by specifying objects representing a video or content library to provide caching for popular items requested on the WEB.

**10.** The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Claims 1-35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18, of copending Application No. 09/087,689; claims 1-20, of copending Application No. 09/107,246; claims 1-18, of copending Application No. 09/287,213 . Although the conflicting claims are not identical, they are not patentably distinct from each other because they recite means or steps that are substantially the same and that would have been obvious to one of ordinary skill in the. 37 CAR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims,

elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

a timely filed terminal disclaimer in compliance with 37 CAR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CAR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. a terminal disclaimer signed by the assignee must fully comply with 37 CAR 3.73(b).

**11.** The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Dynamic push filtering by Hailpern et al., U.S. Patent No. 6,065,058.
- Method and system for distributed caching by Yates et al. , U.S. Patent No. 6,167,438.
- Protocol for distributing fresh content among networked cache servers by Heddaya et al. , U.S. Patent No. 6,205,481.
- System and method for caching identification and location information by Jenkins et al. , U.S. Patent No. 6,157,925.
- client/server flow management by Colby et al. , U.S. Patent No. 6,006,264.
- Information access system and method by Li , U.S. Patent No. 6,049,829.
- Shared WEB page caching by Hunt et al. , U.S. Patent No. 6,253,234.
- Client application availability and response monitoring by Reps et al. , U.S.

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Patent No. 6,070,190.

- Server performance monitoring across a network by Caccavale , U.S. Patent No. 5,459,837.
- System and method for server selection for mirrored sites by Chauhan , U.S. Patent No. 6,115,752.

12 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saleh Najjar whose telephone number is (703) 308-7613. The examiner can normally be reached on Monday-Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AN MENG AI, can be reached on (703) 305-9678. The fax phone number for this Group is (703) 308-9052.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.



Saleh Najjar  
Examiner Art Unit 2154